HARKSOUND®

HS910

Fully Automatic
Quartz-Phase-Locked
Direct Drive Turntable

Service Manual

PARTS LIST, EXPLODED VIEW, DIAGRAMS

CEC International Inc.

ROOM NO. 504, TOHO ESTATE BUILDING, 12-12, 1-CHOME, SHIBUYA, SHIBUYA-KU, TOKYO 150, JAPAN.
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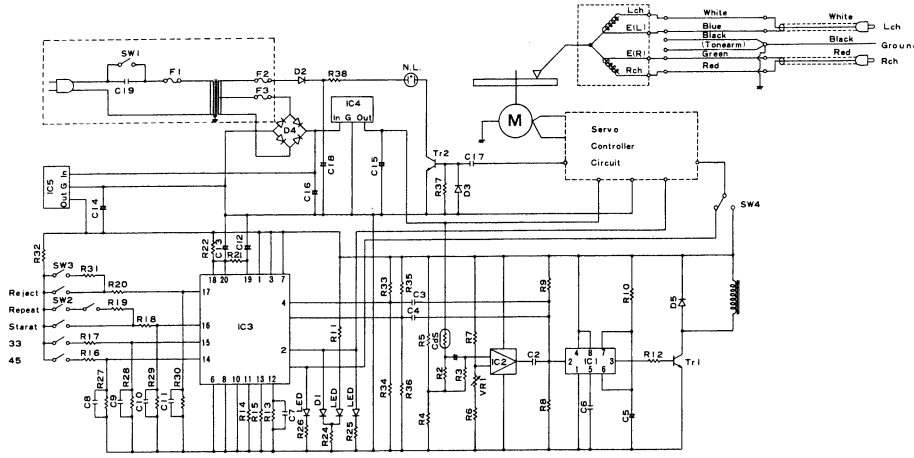
HARKSOUND EUROPE GMBH

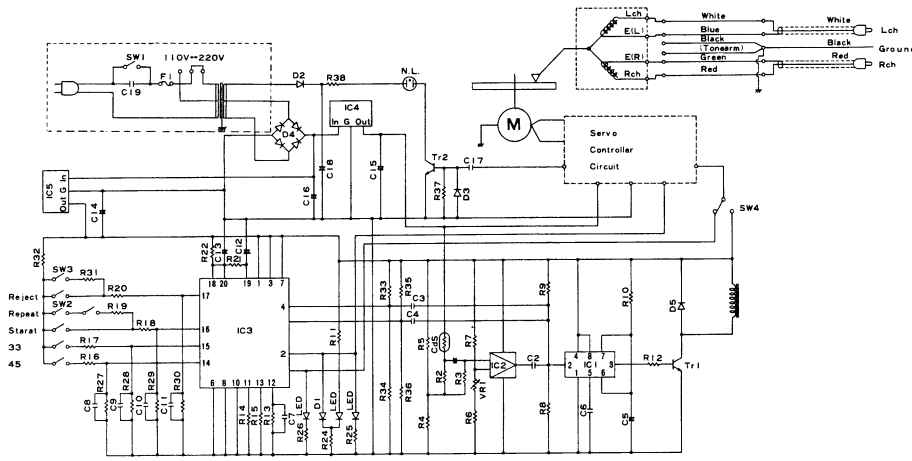
MÜHLENKAMP 63, D-2000 HAMBURG 60, W. GERMANY.
TELEPHONE : 040-276363 / TELEX : 2173688 hark d

CIRCUIT DIAGRAM

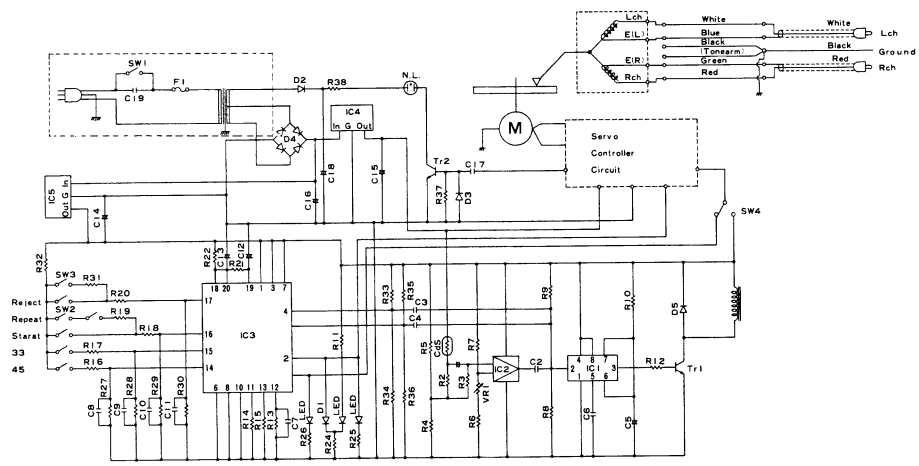
Model E-0



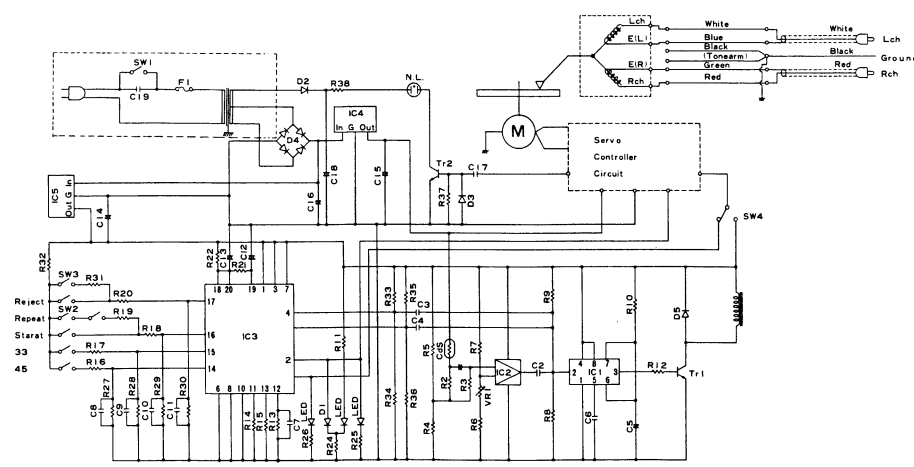
Model E-M



Model E-2



Model E-3-3



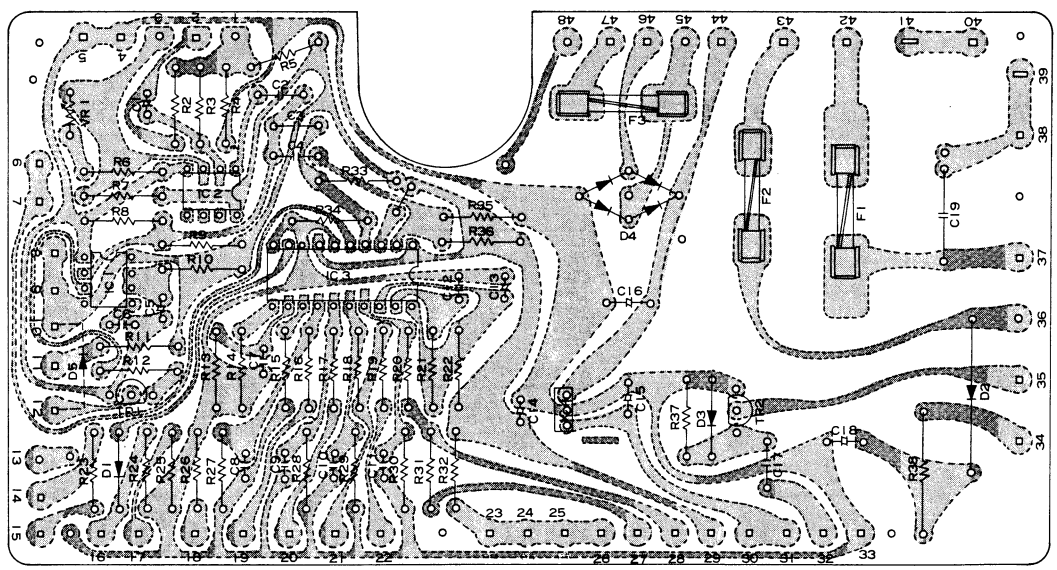
SCREWS, WASHERS AND NUTS

Ref. No.	Description	
301	⊕ Pan head screw (Bronze)	M3x12
302	⊕⊖ Pan head screw (Red)	M4x20
303	⊕ Pan head tapping screw (class 2) (Bronze)	2.6φx6
304	⊕ Pan head tapping screw (class 2)	3φx6
305	⊕ Pan head tapping screw (class 2)	3φx10
306	⊕ Pan head tapping screw (class 2)	3φx14
307	⊕ Pan head tapping screw (class 2)	3φx20
308	⊕ Pan head tapping screw (class 2)	3φx25
309	⊕ Pan head tapping screw (class 2)	3.5φx6
310	⊕ Pan head tapping screw (class 1) (Bronze)	3φx12
311	⊕ Flat head screw (Bronze)	M3x8
312	⊕ Flat head screw (Bronze)	M3x10
313	⊕ Flat head screw (Bronze)	M3x14
314	⊕ Flat head tapping screw (class 2) (Bronze)	3φx8
315	⊕ Brazier head taptite screw B	3φx8
316	⊕ Brazier head taptite screw B	3φx10
317	⊕ Brazier head taptite screw B	3φx16
318	⊕ Brazier head taptite screw B (Bronze)	3φx18
319	⊕ Brazier head taptite screw B (Bronze)	3.5φx18
320	⊕ Pan head Sems screw with spring washer	M3x6
321	⊕ Pan head Sems screw with spring washer (Bronze)	M3x8
322	⊕ Pan head Sems screw with spring washer (Bronze)	M4x8

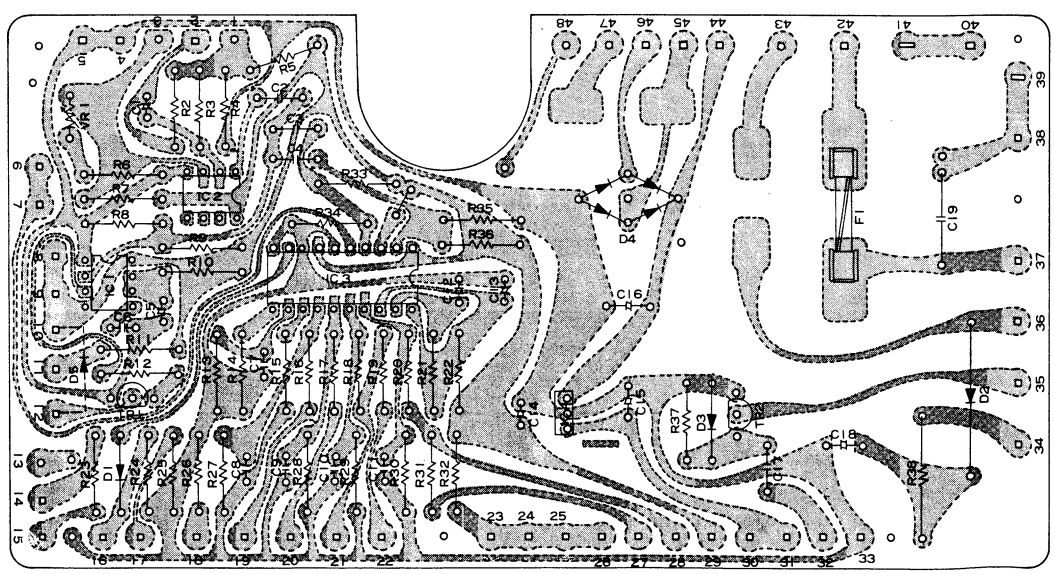
Ref. No.	Description	
323	⊕ Pan head tapping screw (class 2) with plain washer	3φx8
324	⊕ Plastic screw	M3x16
325	Hexagon socket headless set screw	M4x6
326	Hexagon nut	M3
327	Plain washer	3φx8φx0.5t
328	Plain washer	4.5φx12φx1t
329	Plain washer	4.7φx10φx1t
330	Plain washer	6φx14φx1t
331	Plain washer	6.5φx11.5φx0.8t
332	Fiber washer	4φx12φx1t
333	Nylon washer	4.6φx12φx1t
334	Spring washer	3φ
335	Toothed lock washer	3φ
336	Toothed lock washer	4φ
337	E type washer	2φ
338	E type washer	3φ
339	E type washer	4φ
340	Stop ring	CSTW-3
341	Oval lug	3φ
342	Steel ball	4φ
343	Plain washer	3φ x 8φ x 0.3t

POWER SUPPLY PRINTED CIRCUIT BOARD

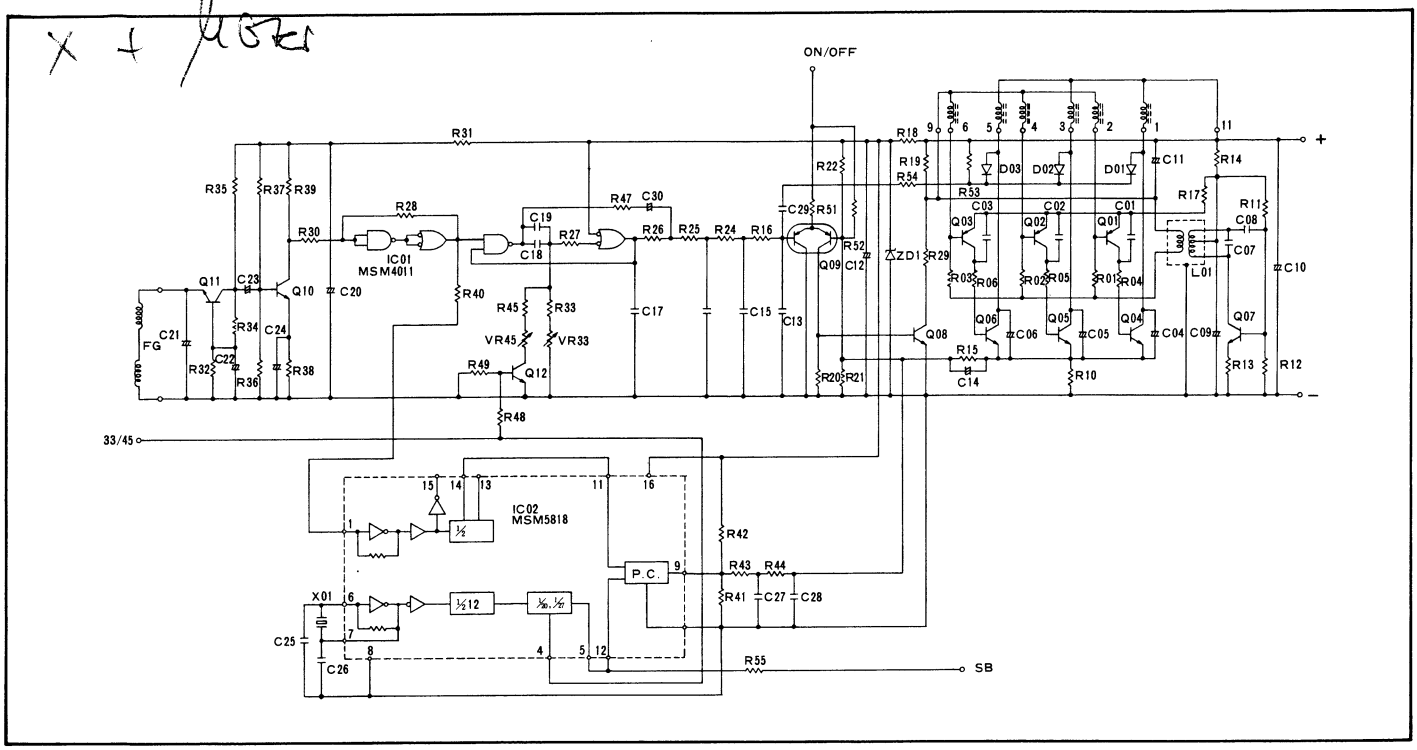
Model E-0



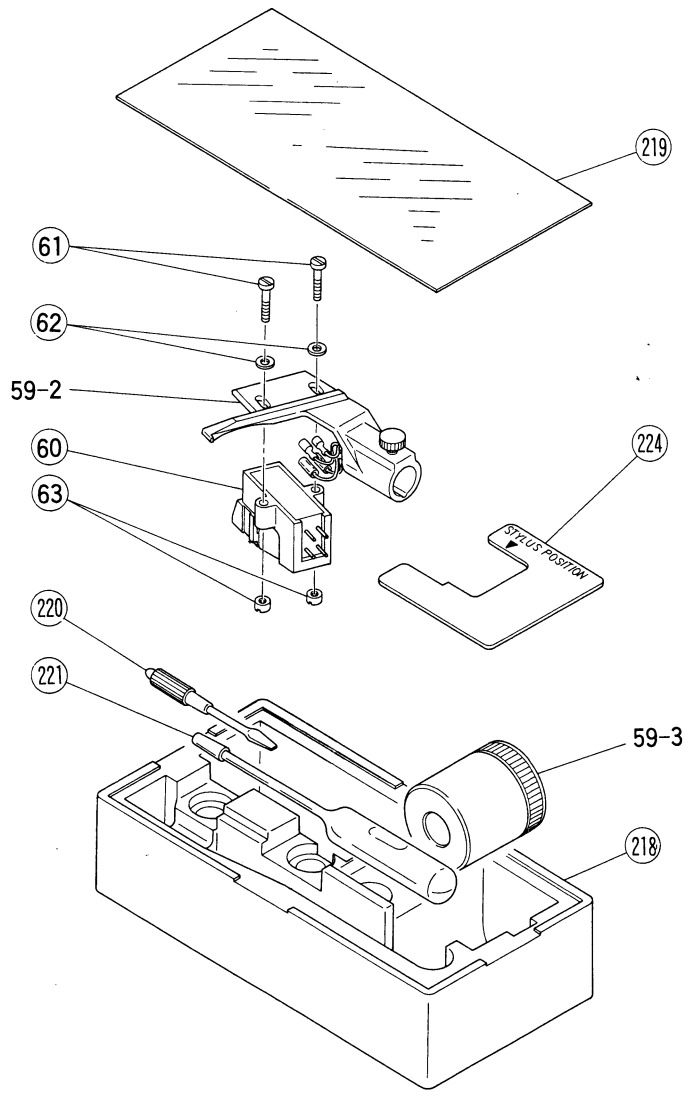
Model E-M, E-2 and E-3-3



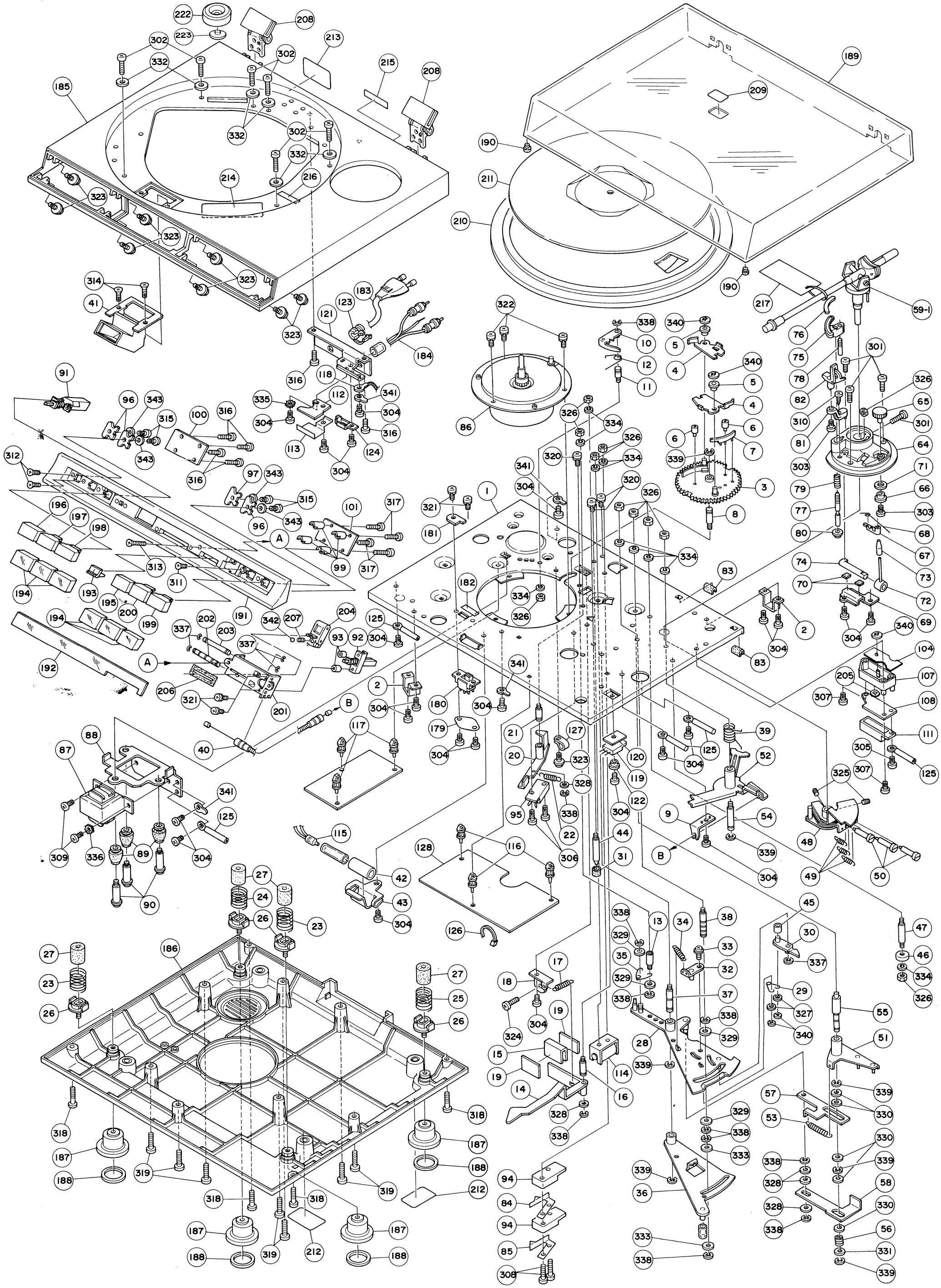
SERVO CONTROLLER CIRCUIT DIAGRAM



ACCESSORY PARTS



EXPLODED VIEW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PARTS LIST

Model	Destination	Voltage/Frequency
E-0	Europe	220V 50Hz
E-M	General territory	117/220V 50/60Hz
E-2	Australia	240V 50Hz
E-3-3	Canada	120V 60Hz

Ref. No.	Parts No.	Description	Model
1	CA 20644-3	Subchassis	
2	CA 45651	Mounting angle	
3	CD 20655-3	Drive gear	
4	CA 45548	Ratchet C	
5	CB 45676	Ratchet collar	
6	CD 45709	Drive gear pin	
7	CD 46080	Guide plate	
8	CB 45596	Drive gear shaft (A)	
9	CA 46341	Release mounting plate (D)	
10	CD 45629	Gear stopper	
11	CB 45598	Gear stopper shaft	
12	CE 45843-1	Gear stopper spring	
13	CB 46394	Spring shaft (T)	
14	CD 30731	Kick lever	
15	CA 45599	Mounting plate	
16	CB 45593	Kick lever shaft	
17	CE 40795	Ratchet spring	
18	CA 45803	Adjusting plate	
19	CD 46161	Cushion rubber	
20	CD 45613	Stop lever	
21	CB 45563	Stop lever shaft	
22	CE 44968	Spring	
23	CE 46244	Float spring (C)	
24	CE 46245	Float spring (D)	
25	CE 46246	Float spring (E)	
26	CD 44937	Spring mounting	
27	CD 42438	Moltprene	
28	C 30745-2	Return plate assembly	
29	CE 46397	Reversed spring	
30	CD 45555	Reversed lever	
31	CD 46162	Cushion stopper	
32	C 45645s	Latch plate	
33	CR 44873	Special screw	
34	CE 46085	Latch plate spring	
35	CE 46392	Reversed spring	
36	C 30744s-2	Lead-in plate assembly	
37	CB 45549	Return plate shaft	
38	CB 45550-1	Spacer shaft	
39	CE 45886	Spring	
40	C 45618s-1	Release assembly	
41	C 45655s	Neon hood assembly	
42	CD 44866	Sleeve	
43	CA 45642	Sleeve mounting plate	
44	CB 45622	Stop shaft	
45	CD 44457	Cushion stopper	
46	CA 46201	Bowl type washer	
47	CB 46338	Spacer shaft B	
48	C 46342s	Tonearm fixing plate assembly	
49	CE 46546	Tonearm fixing plate spring	
50	CR 46170	Adjusting screw	
51	C 46370s	Stopper plate assembly	
52	C 46343s	Select plate assembly	
53	CE 46113	Spring	
54	CB 45551-1	Stopper plate shaft	
55	CB 46339	Stopper plate shaft (B)	
56	CE 46344	Spring	
57	CA 46292	Reset lever (A)	
58	CA 46293	Reset lever (B)	
59	CF 30777	Tonearm assembly	
59-1		Tonearm	
59-2	C 46040s	Headshell	
59-3		Counterweight	
60	CF 45955-1	Cartridge MC20	E-0
60	C 46178s	Cartridge MC20E	E-M
61	CB 43212-0	Cartridge mounting screw	E-0, E-M, E-2, E-3-3
61	CB 43212-2, -7	Cartridge mounting screw	E-2, E-3-3
62	CD 43214	Cartridge mounting washer	
63	CB 43213	Cartridge mounting nut M 2.6	
64	CD 20654	Tonearm base	
65	CD 45523-6	Antiskating knob	
66	CD 45784	Antiskating cam	
67	CD 45341	Antiskating lever	
68	CE 45422	Antiskating spring	
69	CA 45522	Friction plate	
70	CK 44942	Friction pad	
71	CK 46073	Felt washer	
72	C 30738s	Cueing lever	
73	CD 45775	Cueing knob	
74	CD 45348	Cueing cam	
75	CD 30743	Tonearm support	
76	CD 45623-1	Tonearm support rubber	
77	CB 45424	Lift bar	
78	CB 45425	Adjusting screw	
79	CE 45963	Spring	
80	CD 45358	Thrust	
81	CD 45343	Rest arm	
82	C 46000s	Tonearm rest assembly	
83	CD 46398	Cushion	
84	C 46684	Actuator (A) assembly	
85	C 46685	Actuator (B) assembly	
86	C 20648-1	Motor assembly	
87	CF 30702	Power transformer	E-0, E-2
87	CF 30704	Power transformer	E-M
87	CF 30705	Power transformer	E-3-3
88	CA 45580	Transformer mounting plate	
89	CD 44289-1	Motor cushion rubber	
90	CR 45586	Special screw	
91	CF 45817	Power switch	E-0, E-M, E-2
91	CF 45817-1	Power switch	E-3-3
92	CF 45861	Push switch	
93	CB 45785	Spacer	
94	CF 30218	Microswitch	E-0, E-M, E-2
94	CF 30266	Microswitch	E-3-3
95	CF 43233	Microswitch	E-0, E-M, E-2
95	CF 30217	Microswitch	E-3-3
96	C 46174s	LED PCB assembly	
97	CF 45901	LED PCB	
98	CF 45806	LED	
99	CD 45904	Spacer	
100	C 46211-1	Switch PCB assembly	
101	C 46211-2	Switch PCB assembly	
102	CF 45902	Switch mounting PCB	
103	CF 46111	Tact switch	
104	C 45814	CdS assembly	
105	CF 45672	CdS PCB	
106	CF 45807	CdS	
107	CD 45652	CdS housing	
108	C 45858s	Lamp PCB assembly	
109	CF 45673	Lamp PCB	
110	CF 45805	Tube type lamp	
111	CD 45793	Lamp cover	
112	CF 45603	Shield PCB	
113	CA 45583	Shield cover (A)	
114	C 45812s	Solenoid	
115	CF 45818	Neon lamp	
116	CD 30470	PCB fixing spacer	
117	CF 30490	PCB fixing spacer	
118	CF 44074-3	Braided wires	
119	C 45857s	Regulator assembly	
120	CF 44975	Sheet	
121	CA 45582	Cord mounting plate	
122	CD 46396	Bushing	
123	CD 44421	Strain releaf	E-0, E-M
123	CD 44573	Strain releaf	E-2
123	CD 43768	Strain releaf	E-3-3
124	CA 44996	Shielded cord clamping	
125	CA 42667	Metalic clamping	
126	CD 45269	Cable tie	
127	CD 44655	Cord stopper 5N	E-0, E-M, E-3-3
127	CD 44702	Cord stopper 6N	E-2
128	CP 30861-1	Power supply PCB assembly	E-0
128	CP 30862-1	Power supply PCB assembly	E-M, E-2
128	CP 30863-1	Power supply PCB assembly	E-3-3
129	CF 30780-2	Power supply PCB	
130	R4, R5	Carbon film resistor ¼w 270 Ω	
131	R24	Carbon film resistor ¼w 560 Ω	
132	R22	Carbon film resistor ¼w 910Ω	
133	R19, R31	Carbon film resistor ¼w 1KΩ	
134	R11	Carbon film resistor ¼w 1.2KΩ	
135	R25, R26	Carbon film resistor ¼w 1.8KΩ	
136	R34, R35	Carbon film resistor ¼w 2.7KΩ	
137	R12, R33, R36	Carbon film resistor ¼w 3.3KΩ	

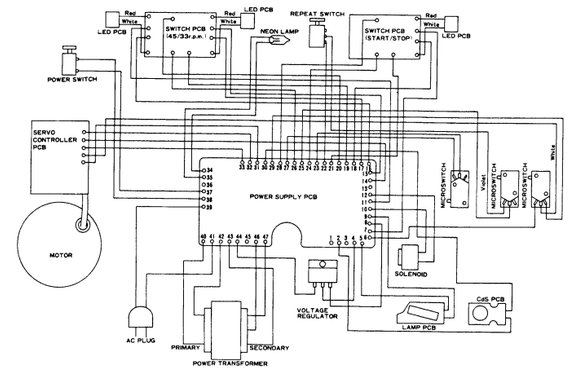
Ref. No.	Parts No.	Description	Model
138	R37	Carbon film resistor ¼w 4.7KΩ	
139	R23	Carbon film resistor ¼w 5.6KΩ	
140	R14, R15	Carbon film resistor ¼w 8.2KΩ	
141	R13, R21	Carbon film resistor ¼w 12KΩ	
142	R3	Carbon film resistor ¼w 22KΩ	
143	R2, R6, R7	Carbon film resistor ¼w 47KΩ	
144	R10	Carbon film resistor ¼w 100KΩ	
146	R8	Carbon film resistor ¼w 270KΩ	
147	R9	Carbon film resistor ¼w 390KΩ	
148	R27, R28, R29 R30	Carbon film resistor ¼w 3.9MΩ	
149	R32	Carbon film resistor ¼w 4.7MΩ	
150	R16, R17 R18, R20	Carbon film resistor ¼w 10MΩ	
151	R38	Metal oxide film resistor 1w 8.2KΩ	
152	VR1	Semi-fixed variable resistor 5KΩ B	
153	C8, C9, C10 C11	Ceramic condenser 3300pF 50V	
154	C6, C7	Ceramic condenser 0.01μF 50V	
155	C2, C3, C4	Mylar film condenser 0.1μF 50V	
156	C17	Mylar film condenser 0.22μF 50V	
157	C12	Aluminum electrolytic condenser 0.47μF 50V	
158	C5	Aluminum electrolytic condenser 4.7μF 16V	
159	C18	Aluminum electrolytic condenser 4.7μF 250V	
160	C1	Aluminum electrolytic condenser 10μF 16V	
161	C13, C14	Aluminum electrolytic condenser 47μF 16V	
162	C15	Aluminum electrolytic condenser 47μF 25V	
163	C16	Aluminum electrolytic condenser 470μF 35V	
164	CF 42734	Condenser C19	E-0, E-M, E-2
164	CF 46105	Condenser C19	E-3-3
165	D1, D3	Diode (optional use) 1SS53 DS448 1S1555	
166	D2	Diode (optional use) DS130Y-C 1S1887 F14D	
167	D4	Diode (optional use) 1S2372A W02	
168	D5	Diode (optional use) DS130Y F14	
169	TR1	Transistor (optional use) 2SC2001 2SD545	
170	TR2	Transistor (optional use) 2SC780A(G)-Y 2SC2228-F 2SC1278(S)	
171	IC1	IC (optional use) RM555-DN μPC1555C NE555V SN72555V LM555CN	
172	IC2	IC (optional use) NJM4558 μPC4558C LM1458	
173	IC3	IC μPC1009C	
174	IC4	IC (optional use) NJM78M18 μPC1431BH LM340T-18 μA78M18	
175	CF 46102	Fuse primary: F1	E-0, E-2
175	CF 30618-3	Fuse primary: F1	E-M
175	CF 46152	Fuse primary: F1	E-3-3
176	CF 30618-2	Fuse secondary: F2	E-0
177	CF 30618-6	Fuse secondary: F3	E-0
178	CA 45585	Radiation plate	
179	CH 44336	Blind	E-0, E-2, E-3-3
180	CF 42680	6P slide switch	E-M
181	CA 42681	Switch mounting	E-M
182	CH 44915	Voltage switch label	E-M
183	CF 30332	AC power supply cord	E-0, E-M
183	CF 30324	AC power supply cord	E-2
183	CF 45932	AC power supply cord	E-3-3
184	CF 46096	Output shielded cord	E-0, E-M, E-3-3
184	CF 30676-1	Output shielded cord	E-2
185	CD 10030-1	Cabinet	
186	CD 10027-3	Bottom base	
187	CD 45931	Rubber leg	
188	CK 45601	Felt leg	
189	CD 20641-1	Dust cover	
190	CD 44205	Dust cover cushion	
191	CD 20663-1	Control plate	
192	CD 30786-2	Control plate badge	E-0
192	CD 30786-3	Control plate badge	E-M, E-2, E-3-3
193	CD 45887	Slide knob	
194	CD 45821	Button cover	
195	CD 45820-3	Operating knob (A)	
196	CD 45820-4	Operating knob (A)	
197	CD 45874-1	Operating knob (C)	
198	CD 45874-2	Operating knob (C)	
199	CD 45874-3	Operating knob (C)	
200	CD 45876-2	Operating knob (D)	
201	CA 30733	Switch plate	
202	CB 45526	Guide shaft (A)	
203	CB 45527	Guide shaft (B)	
204	CD 30732	Slide lever	
205	CK 46496	Cover	
206	CK 45839	Masking sheet B	
207	CE 46207	Spring	
208	CK 30772	Hinge	
209	CK 45949	Dust cover logo	
210	CD 20632-1	Turntable platter	E-0
210	CD 20632	Turntable platter	E-M, E-2, E-3-3
211	CD 20669	Turntable platter mat	
212	CH 46158	Blind seal	
213	CH 46026	Rating label	E-0
213	CH 46023	Rating label	E-M
213	CH 46079	Rating label	E-2
213	CH 46157	Rating label	E-3-3
214	CH 45892-1	Clamp caution label	
215	CH 44312	Serial number label	
216	CH 44969-1	Stylus label	E-0
216	CH 44969-5	Stylus label	E-M
217	CH 46266	Caution label	
218	CD 30417	Parts box	
219	CH 44216	Parts box cover	
220	CD 44217	Screwdriver	
221	CK 44861-1	Oil tube	
222	CD 43100	45 rpm adapter	
223	C 45012	Adapter mounting assembly	
224	CH 46401	Stylus position gauge	
Other parts			
	CH 44979	Caution label	E-3-3
	CH 46103	Fuse label primary	E-0, E-2
	CH 43704	Fuse label primary	E-M
	CH 46164	Fuse label primary	E-3-3
	CH 43548	Fuse label secondary	E-0
	CH 43369	Fuse label secondary	E-0
	CH 44910	Voltage label 220-240V	E-M
	CH 44911	Voltage label 110-120V	E-M
	CH 45606-6	Carton box	E-0
	CH 45606-9	Carbon box	E-M, E-2, E-3-3
		Owner's manual	
	CD 45321	Curl stopper	
	CD 44222	Tonearm packing cushion	
	CD 45051	Rubber ring	
	CD 20665	Styrol pad right side	
	CD 20667	Styrol pad left side	
	CH 45608	Polyethylene bag for unit	
	CH 40112	Polyethylene bag for turntable platter	
	CH 44221	Polyethylene bag for dust cover	
	CH 45609	Polyethylene bag for carton box	
	CH 45972	Polyethylene bag for owner's manual	

WIRING DIAGRAM

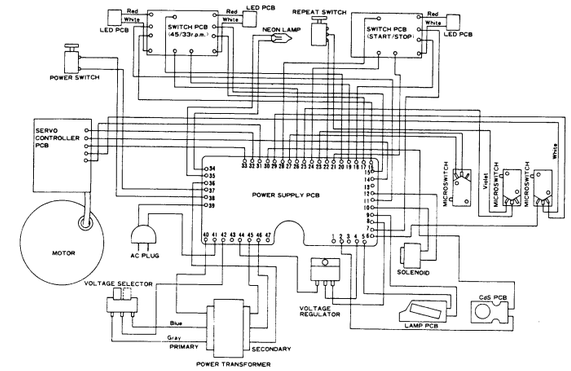
COLOR OF LEAD-WIRE

1	No connection	20	Orange	38	White
2	Gray	21	Violet	39	Black
3	No connection	22	White	40	Black
4	Black	23	Blue	41	Blue (E-0, E-M), Red (E-2), Black (E-3-3)
5	Black	24	Blue		
6	Light blue	25	Blue		
7	Light green	26	Blue		
8	Red	27	Light green	42	Blue (E-0, E-2, E-3-3), Red (E-M)
9	Red	28	Gray		
10	Yellow	29	Red		
11	White	30	Gray	43	Yellow (E-0)
12	Blue	31	Pink	44	Pink
13	No connection	32	Yellow	45	Red (E-M, E-2, E-3-3)
14	Brown	33	Black		
15	Pink	34	Red	46	White
16	Brown	35	Orange	47	Red (E-0)
17	Light blue	36	Yellow (E-M, E-2, E-3-3)	48	No connection
18	Black				
19	Yellow	37	Brown		

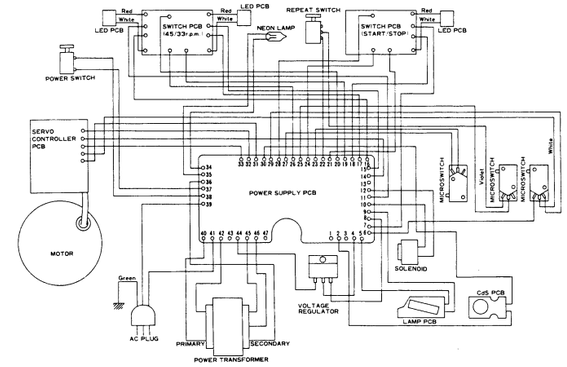
Model E-0



Model E-M



Model E-2



Model E-3-3